

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013019**Date Inspected:** 06-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Zhu Zhong Hai, Mr. Liu Hua Jie, Mr. Xu Tao, Mr. Chen Xi

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

Yard between Bay 15 and Blast Shop #1

This QA Inspector observed ZPMC welder Mr. Kua Wen Shau, stencil 054013 is using shielded metal arc procedure WPS-B-P-2114-FCM-1 to make weld SSD18-PP081-177 on OBG segment 9DE at panel point PP81 adjacent to where cross beam CB12 will be attached. This QA Inspector observed Mr. Kua Wen Shau is welding on the top of a scaffold that is approximately 6 meters above the ground and he appears to be certified to perform this welding. This QA Inspector observed a welding current of approximately 180 amps. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ABF/Sense personnel were performing UT inspections of various welds in OBG segment 9BC. See the photograph below for additional information.

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OBG Bay 13

This QA Inspector observed ZPMC welder Mr. Liu Kaige, stencil 044830 is using flux cored welding procedure WPS-345-FCAW-1G(1F)-Repair-1 to make traveler rail repair weld 20TR2-001-013 in accordance with weld repair document B-WR11016. This QA Inspector observed ZPMC QC Inspector Mr. Guo Yuan Ting is monitoring this welding and that Mr. Cheng Yueying appears to be certified to make this weld. This QA Inspector observed Mr. Guo Yuan Ting has recorded a welding current of 291 amps and 29.9 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Chen Fenglian, stencil 206623 is using flux cored welding procedure WPS-345-FCAW-1G(1F)-Repair-1 to make weld repairs of traveler rail 20TR2-001-017 in accordance with weld repair document B-WR11018. This QA Inspector observed ZPMC QC Inspector Mr. Guo Yuan Ting is monitoring this welding and that Ms. Chen Fenglian appears to be certified to make this weld. This QA Inspector observed Mr. Guo Yuan Ting has recorded a welding current of 293 amps and 30.2 volts. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 14

This QA Inspector observed ZPMC welder stencil 044824 is using flux cored welding procedure WPS-B-T-2133 to make OBG weld SEG3001M-014 at OBG segment 12CE near panel point PP115. This QA Inspector observed QC personnel have recorded a welding current of 220 amps and 25.8 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Jin Chen Mao, stencil 058551 is using flux cored welding procedure WPS-B-T-2231-TC-U4b-F to make OBG weld SEG3003N-012 at OBG segment 12CE near panel point PP115. This QA Inspector observed QC personnel have recorded a welding current of 219 amps and 25.6 volts. This QA Inspector observed that Mr. Jin Chen Mao appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhao Jibo, stencil 055564 is using flux cored welding procedure WPS-B-T-2233-TC-U4b-F to make OBG weld SEG3003L-013 at OBG segment 12CE. This QA Inspector observed QC has recorded welding current of 215 amps and 25.2 volts. This QA Inspector observed that Mr. Zhao Jibo appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Quin Quan, stencil 044774 is using flux cored welding procedure WPS-B-T-4133 to make OBG corner assembly weld CA3005D-001 through -012. This corner assembly will be installed at OBG 12CE panel point 116. This QA Inspector observed QC has recorded a welding current of 225 amps, 25.7 volts and Mr. Zhang Quin Quan appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Lanying, stencil 045265 is using submerged arc welding procedure specification WPS-B-T-2221-B-L2C-S-2 to make groove weld SEG3004*-002 and SEG3004*-020. This QA Inspector measured a welding current of approximately 595 amps and 31.7 volts and Mr. Zhang Quin

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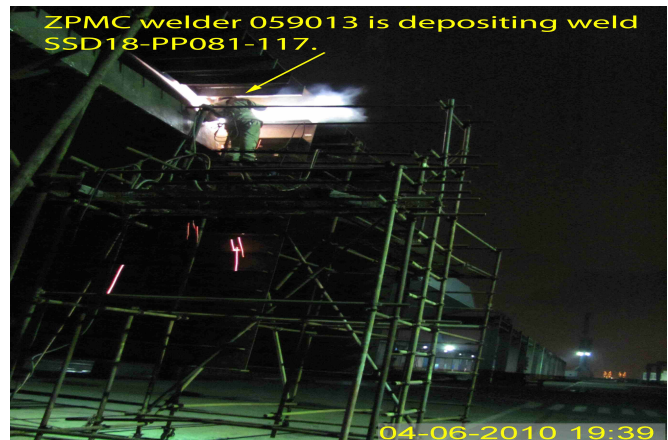
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Quan appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. He Hanbi, stencil 202122 has used flux cored welding procedure WPS-B-T-2133 to make OBG weld DP3064-001-031. This QA Inspector observed QC has recorded a welding current of 287 amps and 30.4 volts. This QA Inspector observed Mr. He Hanbi appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Yard, north of bay 13

This QA Inspector observed ZPMC welder Mr. Yang Yunfei, stencil 215553 is using shielded metal welding process WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG 9CE between the deck and edge plate on the exterior of segment 9CE as directed by critical weld repair document B-CRW-1360. This CWR had been approved by Caltrans Engineering on 4-2-2010. This weld has multiple locations that had ultrasonic rejections. This QA Inspector observed a welding current of approximately 175 amps and Mr. Yang Yunfei appears to be certified to make this weld. ABF representative Mr. Wang Heng informed this QA Inspector the base material had been preheated with an electrical heater prior to welding, and once this weld repair is completed post weld heating will be made using electric heating elements. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container that appears to be connected to the welding cable. Note: access to this weld repair is limited due to the height above the ground. Items observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
